

# CATH LAB INFECTION PREVENTION

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## Frequent questions

- Should I wear, Gown, Gloves, Mask and hat during procedure? ■
- Are the over shoes recommended? ■
- What's the infection rate in Cath Lab? ■
- How about controlling traffic in the Cath Lab? ■
- Do I prepare the patient appropriately? ■

## JCI recommendations

- The joint commission and AOSHA didn't specify aseptic technique for Cath Lab
- is complete sterile General catheterization procedure preformed outside of operating room (as well as intravascular catheter insertions )
- Within the evaluation of the interventional sterility for complex field, Cath Lab need OR and related device procedure

## ASEPTIC TECHNIQUE



## Major points

Introduction. 1

Source of infection in operating room. 2

4-Application of Aseptic Technique in operating room.

## INTRODUCTION

Aseptic and sterile techniques based on scientific principles and carried out primarily to prevent the transmission of microorganisms that can cause infection.

Microorganisms are invisible, but existing in surrounding environment including the air, animate, and inanimate objects.

To prevent infection, all possible measures must be taken to create and maintain an aseptic environment for the patient. (Clean, disinfection, and sterilization)

The term Asepsis is used to describe the techniques of keeping the work area and personnel as free from microorganisms as possible with the intent of protecting the patient and the caregiver.

## Sources of Infection in cath room

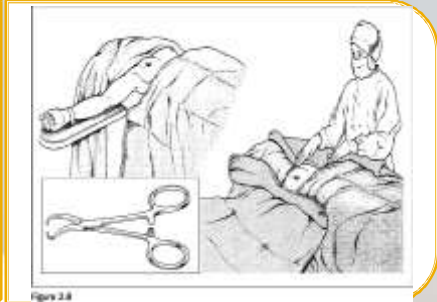
• **PATIENT**



**Staff •  
Members**




**• All articles used  
in sterile field**



Application of Aseptic technique

# HOW?



# DISPENSING STERILE SUPPLIES



## MAINTAINING A STERILE FIELD



## GENERAL CONSIDERATIONS

Only sterile items are used within the sterile .1 field.

Prior to items being dispensed to the sterile .2 field check the external and internal chemical indicators on and in the package, check for package integrity, and package expiration (if appropriate).

Items which display a manufacturer's expiry .3 date shall be considered unsafe for use after that date.

(Rationale: Expiry dates do not guarantee either sterility or lack of sterility. Frequently expiry



Whenever a sterile item has been .5 compromised, the package contents, gown or the sterile field involved must be considered contaminated. This may happen when:  
non sterile items contact sterile items. .a  
liquids or moisture soak through the .b  
package

Single-use medical devices shall only be .6 used on an individual client for a single procedure and then must be discarded.

Reusable medical devices shall be .7 reprocessed according to the manufacturer's directions for use and in accordance with

8. If in doubt about the sterility of the item, it is not considered sterile.

This includes:-

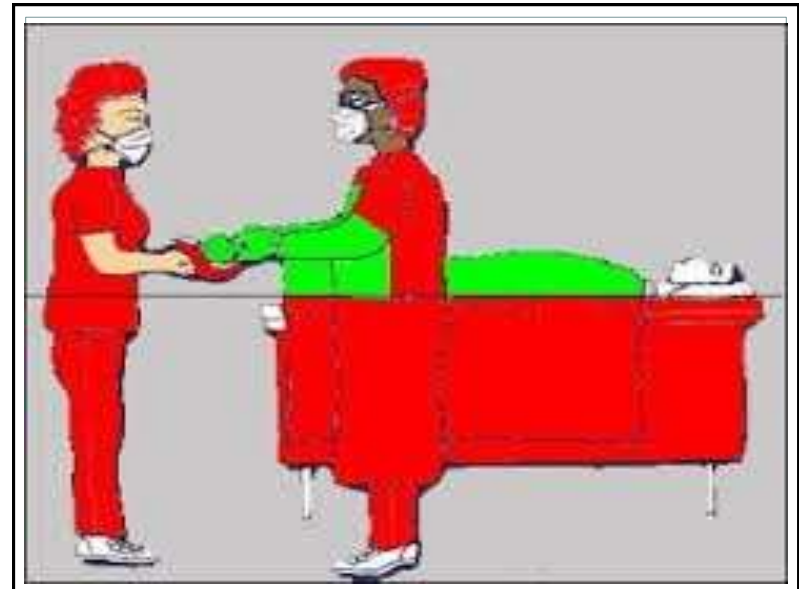
- a. items found in unmonitored areas,
- b. any indication of the package being wet .
- c. any package without chemical indicator .
- d. any package that has been dropped or, any package that shows evidence of crushing, perforations or holes.

## Principles in surgical asepsis

Principles	Rationale
Always face the sterile field. Do not turn back or side on a sterile field	Sterile objects which are out of vision are considered questionable and their sterility cannot be guaranteed.
Keep sterile equipment above your waist level or above table level.	Waist level and table level are considered margins of safety and will promote maximum visibility of the sterile field.
Do not speak, sneeze and cough over a sterile field.	To prevent or droplet infection.
Never reach across sterile field	When a nonsterile object is held above a sterile object, Gravity causes micro organisms to fall into the sterile field.

Principles	Rationale
Keep the unsterile objects away from the sterile field.	Micro organisms may be transferred whenever a non sterile object touches a sterile field.
Keep the sterile field dry	Micro organisms do not pass easily through a dry surface.
The edge of the sterile field is considered nonsterile.	Proximity to a contaminated area makes sterility doubtful.
Handle liquids cautiously near the sterile field or prevent drapes or wrappers from becoming wet.	When a liquid wets it connects a nonsterile field with a sterile field.

Principles	Rationale
Each sterile supply should be clearly labeled as to its contents, time and date of sterilization.	To ensure sterility.
Never assume that a object is sterile. Always check the sterility expiration date.	Sterility of an object wrapped in paper or cloth becomes doubtful after 4 weeks.
Avoid sweeping and dusting when the sterile objects are opened.	Micro -organisms travel in the dust particles
Put on mask, Wash hands, put on gowns and gloves before handling sterile supplies.	To prevent contamination.




## SURGICAL HAND SCRUB




## SURGICAL HAND ANTISEPSIS

- \*Process of removing as many microorganisms as possible from the hands and forearms by mechanical washing and chemical antiseptics before participating in a surgical procedure.
- \*Should be performed prior to donning sterile gloves or sterile gowns and gloves for surgical or other invasive procedures.
- \*Can be achieved with either an antimicrobial surgical scrub agent (*surgical hand scrub*) or an alcohol based antiseptic surgical hand rub.

### GENERAL CONSIDERATIONS



This slide illustrates general considerations for hand hygiene and personal protective equipment (PPE). It features four images: 1) A close-up of hands being washed, with a red 'X' indicating an incorrect technique. 2) A healthcare worker wearing a blue surgical cap, face shield, and yellow mask, with a green checkmark indicating correct PPE use. 3) A healthcare worker washing their hands at a sink, with a green checkmark indicating correct hand hygiene. 4) A close-up of hands being washed, with a green checkmark indicating correct technique.



This slide illustrates correct hand hygiene and glove use. It features four images: 1) A hand holding a white cloth, with a green checkmark indicating correct technique. 2) A hand holding a white cloth, with a green checkmark indicating correct technique. 3) Hands being washed under a faucet with soap, with a green checkmark indicating correct hand hygiene. 4) Hands being dried with a white paper towel, with a green checkmark indicating correct technique.

## Three Scrub Cycles

A surgical scrub occurs in three cycles:

**1**

Hands and arms  
extending to two  
inches above the  
elbow

**2**

Hands and  
halfway up the  
forearms

**3**

Hands only



## Three Scrub Cycles

These steps ensure that all areas of the hand are cleaned thoroughly. Each cycle of the hand scrub should be repeated for each of the three washing cycles.

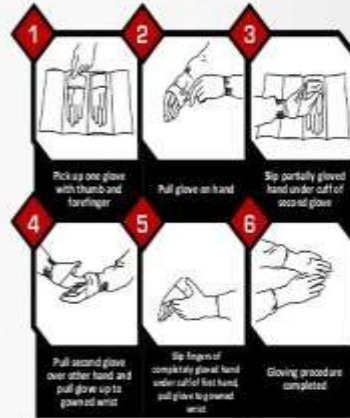
This follows the principle of washing from a clean area (the hand) in the direction of the less clean area (the arm). Your hands should be held above the level of your elbows at all times to prevent dirty water from dripping from the upper arm onto lower sterile areas.



## Gloving

There are two main techniques used to pull on sterile gloves: the open glove technique and the closed glove technique.

Here the closed technique is described. At no point during this procedure should your bare hands extend beyond the gown cuffs, or touch the outside of the gloves.



## GLOVING AND GOWNING

### ■ GOWNING AND CLOSED GLOVING







